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## Two Types of Neuter: Closest-Conjunct Agreement in the Presence of '5 and Ups'

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## Two Types of Neuter: Closest-Conjunct Agreement in the Presence of ‘5 and ups’

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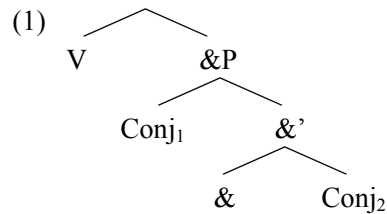
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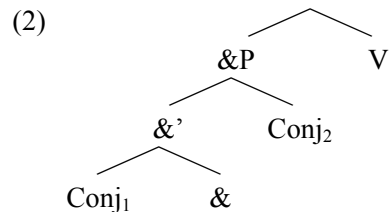
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### 1. Highest-Conjunct Agreement and Closest-Conjunct Agreement

Highest conjunct agreement (HCA) is a common phenomenon in natural languages (e.g. Aoun *et al.* 1994, Munn 1999, Citko 2004 etc). HCA is found when the subject follows the verb and the verb agrees with the highest conjunct within a conjoined noun phrase. Analyses of HCA typically make reference to the structure of ConjP: the first conjunct occupies the specifier position and the second the complement position, and thus only the first conjunct is accessible for agreement with a higher verb (e.g. Munn 1999, Citko 2004).



The purely hierarchical analysis predicts that one should not find second conjunct agreement even when the subject is preverbal, except perhaps in head final languages if the structure of ConjP in head final languages is as given in (2) (Johannessen 1998)



However, second conjunct agreement with preverbal subjects exists in Slovenian, Serbo-Croatian, and Ndebele (Moosally 1994, Marušič, Nevins & Saksida (2007), Bošković 2008), as in Slovenian (3-4) (from Marušič, Nevins & Saksida 2007):

- (3) [Krave in teleta] so odšla na pašo.  
 [cow<sub>F,PL</sub> and calf<sub>N,PL</sub>] aux went<sub>N,PL</sub> on grazing  
 'Cows and calves went grazing'

- (4) [Teleta in krave] so odšle na pašo.  
 [calf<sub>N,PL</sub> and cow<sub>F,PL</sub>] aux went<sub>F,PL</sub> on grazing  
 'Calves and cows went grazing'

However, Slovenian, Serbo-Croatian, and Ndebele are not head-final. Moreover, though second conjunct agreement exists in head-final languages such as Tsez and Hindi, these languages also have First Conjunct Agreement (Benmamoun, Bhatia & Polinsky 2009). Marušič, Nevins & Saksida (2007) claim Last Conjunct Agreement (LastCA) arises because while number can be computed at the level of the entire coordination (call this *Computation-by-ConjP*), there is no way to say what the gender of the entire coordinated subject is based on its daughters. As a result, in order to record a value for gender, the verb must search for gender separately (through a second instance of Agree) within the ConjP, and when doing so it may resort to the precedence relation rather than to dominance. LastCA in preverbal conjuncts, then, is the result of a linearly-computed closest-conjunct agreement within the ConjP projection.

The study by Marušič, Nevins and Badecker (2008) confirmed that Linearly-Closest CA is one of the strategies speakers of Slovenian use in such cases. The other two strategies are default masculine agreement (which is, by hypothesis, agreement with the ConjP head itself) and

highest conjunct agreement. Marušič, Nevins and Badecker (2008) found that when the subject follows the verb, the verb can either agree with ConjP, resulting in default masculine agreement, or it can agree with the first -- and also linearly closest -- conjunct. However, when the subject precedes the verb, agreement on the verb can be default masculine (i.e. agreeing with ConjP), it can agree with the closest conjunct, or else it can agree with the highest conjunct. As a result, when the conjunction combines a neuter and a feminine plural noun, all three genders are in principle possible on the verb, as a result of the three separate agreement strategies of default agreement (argued to be agreement with ConjP itself), highest conjunct agreement, or last-conjunct agreement.

(5) [Krave in teleta ] so se pasli /pasla /pasle.  
 [cow<sub>FEM-PL</sub> and calf<sub>NEU-PL</sub> ] aux refl graze<sub>MASC-PL/NEUT-PL/FEM-PL</sub>  
 'Cows and calves grazed.'

(6) [Teleta in krave ] so se pasli /pasla /pasle.  
 [calf<sub>NEU-PL</sub> and cow<sub>FEM-PL</sub> ] aux refl graze<sub>MASC-PL/NEUT-PL/FEM-PL</sub>  
 'Calves and cows grazed.'

In this paper we will focus on cases in which agreement with ConjP is blocked due to the presence of a numerically-quantified noun phrase within the conjunction, as shown in (7).

(7) 6 fantov in 6 deklet je brcalo žogo po igrišču.  
 6 boys<sub>GEN-PL</sub> and 6 girls<sub>GEN-PL</sub> aux<sub>SG</sub> kicked<sub>N-SG</sub> ball around court  
 'Six boys and six girls kicked the ball around the court.'

As (7) shows, the presence of a numerically-quantified noun phrase (which we call a “5&Up”, for convenience) within a conjunction blocks even Computation-by-Conj of number, yielding singular agreement on the verb. This phenomenon will be the central focus of the current paper, and we proceed by providing background on numerals in Slovenian.

## 2. Numerals in Slovenian

The reader may be surprised to know that the phenomenon we are mentioning occurs only with numerals higher than 4 (hence the name

“5&Ups”). There are roughly three types of numerals in Slovenian, whose agreement patterns we discuss in ascending order.

## 2.1 Adjectival: 1 to 4

Numerals 1, 2, 3, 4 are adjectival in nature. The noun determines the gender of the entire nominal phrase, as reflected in verbal agreement and on the numeral, (8a-bi). The numeral agrees with the noun also in case just like any other adjective, (8a-biii). The verb agrees with the entire nominal in gender, number and person, (8a-bii).

- (8) a. i) **ena** ro**ža** | en korak | **eno** mesto.  
           one<sub>F</sub> rose<sub>F</sub> | one<sub>M</sub> step<sub>M</sub> | one<sub>N</sub> town<sub>N</sub>  
       ii) Ena hiša je čakala na obnovo.  
           one<sub>F</sub> house<sub>F</sub> aux<sub>SG</sub> waited<sub>F,SG</sub> on renovation  
       iii) Eni hiši manjka streha.  
           one<sub>F,Dat</sub> house<sub>F,Dat</sub> lacks roof  
       b. i) **dve** ro**ži** | **dva** koraka | **dve** mesti  
           two<sub>F</sub> roses<sub>F</sub> | two<sub>M</sub> steps<sub>M</sub> | two<sub>N</sub> towns<sub>N</sub>  
       ii) Dve mesti sta praznovali.  
           two<sub>N</sub> towns<sub>N</sub> aux<sub>DU</sub> celebrate<sub>N,DU</sub>  
       iii) **Dvema** mestoma ne morejo dati prvenstva.  
           two<sub>N,Dat</sub> towns<sub>N,Dat</sub> not can<sub>3P,PL</sub> give<sub>INF</sub> championship  
           'Two towns cannot get the championship.'

## 2.2 Quantifiers: 5 & up

For numerals above 4, the numeral has the same form for all genders – showing no agreement with the noun. The head noun is in genitive plural when the entire noun phrase receives nominative or accusative (like in Russian, Serbo-Croatian, Polish etc; Babby 1985, Halle 1990, Franks 1994, Pereltsvaig 2006).

- (9) a. pet hiš,                      pet korakov,                      pet mest  
       5 houses<sub>F,GenPL</sub>            5 steps<sub>M,GenPL</sub>                5 towns<sub>N,GenPL</sub>  
       b. sto hiš,                      sto korakov,                      sto mest  
           100 houses<sub>F,GenPL</sub>        100 steps<sub>M,GenPL</sub>              100 towns<sub>N,GenPL</sub>

Like in Serbo-Croatian (but unlike in Russian), verbal agreement is not with the noun phrase: the verb spells out a last-resort default value for

third person neuter singular (like in Serbo-Croatian), the same agreement value found when a sentence lacks a nominative argument entirely (11).

- (10) a. Pet evrov je bilo premalo / \*so bili premalo.  
5 euro<sub>M</sub> aux<sub>SG</sub> been<sub>N.SG</sub> too-little / aux<sub>PL</sub> been<sub>M.PL</sub> too-little  
b. Tri tisoč evrov je bilo premalo / \*so bili premalo.  
3000 euro<sub>M</sub> aux<sub>SG</sub> been<sub>N.SG</sub> too-little  
c. Pet tisoč evrov je bilo premalo / \*so bili premalo.  
5000 euro<sub>M</sub> aux<sub>SG</sub> been<sub>N.SG</sub> too-little
- (11) a. Zdelo se mi je, da je Peter pijan.  
seemed<sub>N.SG</sub> refl I<sub>DAT</sub> aux<sub>SG</sub> that aux<sub>SG</sub> Peter<sub>Nom</sub> drunk  
'It seemed to me, that Peter is drunk.'  
b. Janezu je ugajalo piti pivo.  
Janez<sub>DAT</sub> aux<sub>SG</sub> pleased<sub>N.SG</sub> drink<sub>INF</sub> beer  
'Drinking beer pleased John.'  
c. Janezu je zmanjkalo denarja.  
Janez<sub>DAT.M</sub> aux<sub>SG</sub> lack<sub>Neut.SG</sub> money<sub>ACC.M</sub>  
'Janez lacks money.'

With respect to case and agreement, 5&Ups can be viewed as comparable to quantifiers like *nekaj* 'some', *malo* 'a few', *mnogo* 'a lot' etc., all of which require the noun to be in genitive plural and trigger neuter singular agreement on the verb.

- (12) a. Nekaj deklic je igralo karte.  
some girls<sub>GEN-PL</sub> aux<sub>SG</sub> played<sub>N-SG</sub> cards  
'Some girls played cards.'  
b. \*Nekaj deklic so igrale karte.  
some girls<sub>GEN-PL</sub> aux<sub>PL</sub> played<sub>F-PL</sub> cards

### 2.3 Noun numerals – milijon, milijarda

Finally, very high numbers like *Milijon* 'million' and *milijarda* 'billion' are simply regular nouns (see Heritty 2000 for more information on Slovenian numbers).

- (13) milijarda ljudi | milijardi ljudi  
billion<sub>NOM.SG-FEM</sub> people<sub>GEN.PL</sub> | billion<sub>DAT.SG-FEM</sub> people<sub>GEN.PL</sub>

- (14) Dve milijardi evrov sta izpuhteli.  
 2 billion<sub>DU</sub> euros<sub>GEN.PL</sub> aux<sub>DU</sub> vanished<sub>DU.F</sub>  
 'Two billions euros have vanished.'

### 3. The Internal Structure of 5&up Noun Phrases

As mentioned above, 5&ups in Slovenian always trigger **neuter singular** agreement on the verb, even though they clearly refer to a plurality.

- (15) a. Tistih 10 fantov **je** brcalo žogo po dvorišču.  
 those 10 boys<sub>GEN.PL</sub> AUX<sub>SG</sub> kicked<sub>N-SG</sub> ball around yard  
 'Those 5 boys kicked the ball around the yard.'  
 b. \*Tistih 10 fantov **so** brcali žogo po igrišču.  
 those 10 boys<sub>GEN.PL</sub> AUX<sub>PL</sub> kicked<sub>M-PL</sub> ball around yard

5&Ups are not performing a collectivizing function of turning the noun phrase into a mass noun, as a coordination of two mass nouns leads to dual agreement in Slovenian (17):

- (16) a. Tistih 6 deklic **je** nabiralo rožice.  
 those 6 girls<sub>GEN.PL</sub> AUX<sub>SG</sub> picked<sub>N-SG</sub> flowers  
 'Those 6 girls picked flowers.'  
 b. \*Tistih 6 deklic **so** nabirale rožice.  
 those 6 girls<sub>GEN.PL</sub> AUX<sub>PL</sub> picked<sub>F-PL</sub> flowers  
 (17) Snop vej in šop listja sta bila zame pretežka.  
 bundle branches and bundle leaves were<sub>MASC.DU</sub> for me too-heavy

Within the 5&Up, like in Russian and Polish (and unlike in Serbo-Croatian), in Slovenian the head noun inflects for an oblique case (dat., gen., instr., and loc.) when the entire nominal phrase receives it. Importantly, unlike in Serbo-Croatian, the Slovenian numeral typically declines as well (especially for numerals under 100).

- (18) a. s sedmimi knjigami  
 with 7<sub>INST-PL</sub> books<sub>INST</sub>  
 b. v dvanajstih sobah  
 in 12<sub>LOC-PL</sub> rooms<sub>LOC</sub>

- c. stotim puncam  
100<sub>DAT-PL</sub> girls<sub>DAT</sub>

Franks (1994) presents a comparison of Serbo-Croatian vs. Russian numerically-quantified NPs relevant for the discussion of Slovenian. Like Russian (but not Serbo-Croatian), Slovenian seems to have a structural Genitive of quantification (allowing oblique case within the NP). On the other hand like Serbo-Croatian (but only optionally in Russian), the verbal agreement is not with the noun, but rather is default third person singular.

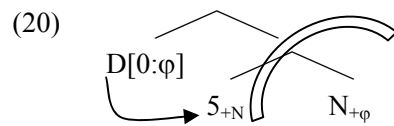
Franks also discusses Polish, which seems to pose the same problem: like Slovenian and Russian, the noun has oblique endings in oblique case positions, and like in Slovenian and Serbo-Croatian, there is no agreement. Franks's solution for Polish is the stipulation that in Polish the genitive of quantification is only assigned in accusative DPs. In Franks (2002), he extends this analysis to claim that numerically quantified subject noun phrases are actually *accusative subjects* in Polish (and Czech). We do not adopt this radical proposal, because we cannot think of any way to falsify or confirm it.

Pereltsvaig (2006) proposed that the lack of agreement that may optionally occur with Russian 5&ups results from the lack of a full DP projection in such configurations. Her analysis, however, cannot be easily extended to Slovenian since the Slovenian 5&up nominals never trigger agreement, yet pass all the tests used to determine the presence of the DP projection: they can receive a specific interpretation, (15a) and (16a) above and (19a), they can be the controllers of PRO, (19b), and can be antecedent of anaphors, (19c) (for other tests see Pereltsvaig 2006, 447):

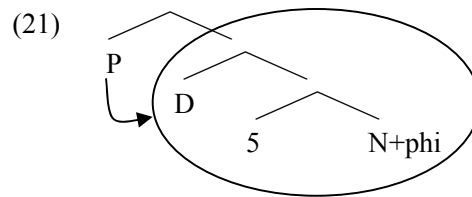
- (19) a. Točno določenih pet igralcev je kupilo Ferrarija.  
exactly certain 5 actors aux<sub>SG</sub> bought Ferrari  
'Certain 5 actors bought a Ferrari.'
- b. Sto dijakov se je odločilo počakati do kosila.  
100 pupils refl aux<sub>SG</sub> decided wait<sub>INF</sub> untill lunch  
'100 pupils decided to wait until Lunch.'
- c. 5 punc se je občudovalo v ogledalu.  
5 girls refl aux<sub>SG</sub> admire in mirror.  
'Five girls were admiring themselves in the mirror.'



We propose that when Slovenian D probes for phi-features in its complement, the numeral is +N (Halle 1990) but lacks phi-features, but due to relativized minimality, blocks Agree with the phi-bearing Noun. This case of defective intervention leads to absence of phi-features on the D-level.



However, when the noun phrase is merged into the clausal structure in an oblique case position, the entire DP is marked with oblique case, following Matushansky (2009), who argues that Case is assigned by a head to its sister, and percolates down. Case is thus viewed as a property of a domain rather than of an NP. The entire sister of a P will take the corresponding oblique case:



#### 4. 5&UPs inside conjunctions

Surprisingly, even when such noun phrases are **conjoined**, the agreement must remain singular, (24) (this fact reported in Franks 1994).<sup>1</sup>

<sup>1</sup> Unlike past participles, which agree in neuter singular, adjectives in simple predicate clauses or in adjectival passives, agree with the noun in genitive plural, as shown in (i). Since adjectival plural declination is syncretic for all genders, there is no way to know where the adjective copies gender from.

(i) 5 fantov je bilo utrujenih.  
 5 boys aux<sub>SG</sub> were<sub>N-SG</sub> tired<sub>GEN-PL</sub>  
 'Five boys were tired.'

Adjectives need to value case, and case and number are inseparable in Slavic. Hence, the adjective looks for the linearly closest noun and takes both case and number from it, as shown by the fact that mass noun complements of 'nekaj', which take genitive singular, trigger genitive singular agreement on the adjective. The fact that both number and case

- (22) a. Šest fantov in šest deklet **je** brcalo žogo.  
6 boys<sub>GEN-PL</sub> and 6 girls<sub>GEN-PL</sub> aux<sub>SG</sub> kicked<sub>N-SG</sub> ball  
b. \*Šest fantov in šest deklet **so** brcali žogo.  
6 boys<sub>GEN-PL</sub> and 6 girls<sub>GEN-PL</sub> aux<sub>PL</sub> kicked<sub>M-PL</sub> ball

This is entirely unexpected when comparing such structures to other conjoined singular noun phrases, which without exception trigger dual or plural agreement, (23).

- (23) Fant in dekle **sta** brcala /\*je brcal /\*brcala /\*brcalo žogo.  
boy and girl aux<sub>DU</sub> kicked<sub>M,DU</sub>/aux<sub>SG</sub> kicked<sub>M.SG/F.SG/N.SG</sub> ball  
'A boy and a girl were kicking a ball.'

The neuter singular of a true neuter noun such as *teleta* 'calf' does not interact in a conjunct in the same way as the default neuter singular of 5&Ups. Coordination of two singular neuters yields agreement in dual.<sup>2</sup>

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are supplied directly to the adjective over the intervening participle is suggestive that this happens when the clause is already linearized.

- (ii) Nekaj mesa je bilo zamrznjenega.  
some meat<sub>GEN-SG</sub> aux<sub>SG</sub> were<sub>N-SG</sub> frozen<sub>GEN-SG</sub>  
'Some of the meat was frozen.'

- (iii) Nekaj čevapov je bilo zamrznjenih.  
some kebabs<sub>GEN-PL</sub> aux<sub>SG</sub> were<sub>N-SG</sub> frozen<sub>GEN-PL</sub>

Adjectival secondary predicates show the same kind of agreement (as pointed out by Miloje Despić). When the subject is coordinated, adjectives (participial and predicative) agree with the last conjunct, (iv)-(v). These facts may be related to D'Alessandro's (2004) observation that adjectival agreement is more semantic, while verbal agreement is more syntactic.

- (iv) Vse punce in vseh 5 fantov je bilo utrujenih.  
all girls and all 5 boys aux<sub>SG</sub> were<sub>N-SG</sub> tired<sub>GEN-PL</sub>  
'All girls and all five boys were tired.'

- (v) Vsi fantje in vseh pet punc je prišlo domov pijanih  
All boys and all<sub>GEN-PL</sub> 5 girls<sub>GEN-PL</sub> aux<sub>SG</sub> came<sub>N-SG</sub> home drunk<sub>GEN-PL</sub>  
'All boys and all five girls came home drunk.'

<sup>2</sup> Two bare singular neuter demonstrative pronouns can result in neuter singular (see also van Koppen & Rooryck 2008), but this is only the case with 'to in ono', as in (i).

- (i) To in ono je bilo še za narediti.  
this and that aux<sub>SG</sub> was<sub>N,SG</sub> still for do  
'We still had to do this and that.'

'To in ono' in this use does not refer to two individuals/items, it roughly means 'something'. It is a frozen idiomatic form parallel to English 'a bit of this and a bit of that', which also triggers singular agreement, (ii).

- (24) Kladio in dleto sta ležali / ležala /\*je ležalo na mizi.  
 hammer<sub>N</sub> and chisel<sub>N</sub> aux<sub>DU</sub> laid<sub>N,DU</sub>/laid<sub>M,DU</sub>/aux<sub>SG</sub> laid<sub>N,G</sub> on tbl  
 'A hammer and a chisel were laying on the table.'

Most interestingly, combining a 5&Up with a regular plural noun phrase yields the following pattern. When the closer conjunct is a regular plural nominal, agreement is plural (in the gender of the closest nominal). When the closer nominal phrase is 5&Up, agreement is singular, (26).

- (25) a. Pet stanovanj in vse hiše so se prodale poceni.  
 5 flats<sub>GEN-PL</sub> and all houses<sub>F</sub> aux<sub>PL</sub> refl sold<sub>F-PL</sub> cheaply  
 b. Poceni so se prodala vsa stanovanja in pet hiš.  
 cheaply aux<sub>PL</sub> refl sold<sub>N-PL</sub> all flats<sub>N</sub> and 5 houses<sub>GEN-PL</sub>
- (26) a. Vse hiše in pet stanovanj se je prodalo poceni.  
 all houses<sub>F</sub> and 5 flats<sub>GEN-PL</sub> refl aux<sub>SG</sub> sold<sub>N-SG</sub> cheaply  
 b. Poceni se je prodalo pet hiš in vsa stanovanja.  
 cheaply refl aux<sub>SG</sub> sold<sub>N-SG</sub> 5 houses<sub>GEN-PL</sub> and all flats<sub>N</sub>

The novel empirical finding is the following: *whenever there is a 5&Up in the conjunct, agreement is forced with the Closest Conjunct.*<sup>3</sup>

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(ii) A (little) bit of this and a (little) bit of that is all I need to make this soup.  
 Singular agreement is found also when the subject contains two coordinated indefinite pronouns with an adjective.

(iii) Nekaj lepega in nekaj dišečega je stalo na mizi.  
 something nice and something smelling aux<sub>SG</sub> stood<sub>N-SG</sub> on table  
 'Something nice and something smelling nicely was on the table.'

Given the analysis of indefinite pronoun plus adjective constructions in Slovenian in Marušič and Žaucer (to appear), neuter singular agreement is expected since *nekaj* in (iii) is a quantifier meaning 'some' in e.g. *nekaj lepega sadja/nekaj lepih hrušk* ('some nice fruit'/some nice pears'), which behaves parallel to the numbers 5 and up.

<sup>3</sup> As pointed out by Boban Arsenijević, this predicts that when a 5&up combines with a singular noun phrase and the singular noun phrase is the closer one, we should find singular agreement – i.e. agreement with the closest conjunct. This prediction is not born out, as shown in (i).

(i) 5 fantov in 1 deklica so peli / je pelo /\*je pela lepe pesmi.  
 5 boys and 1 girl aux<sub>PL</sub> sing<sub>M-PL</sub> aux<sub>SG</sub> sing<sub>N-SG</sub> aux<sub>SG</sub> play<sub>F-SG</sub> nice songs  
 'Five boys and one girl sang nice songs.'

We propose a constraint against agreement with(in) conjunctions leading to [+singular], the nature of which will require further investigation.

#### 4.1 CCA is not clausal conjunction (Aoun et al. 1994)

Aoun et al. (1994) proposed that instances of closest conjunct agreement could be analyzed from conjunction of two clauses where each clause contains only one of the conjuncts. This means that agreement with the closest conjunct is simply agreement with the only conjunct in the relevant clause, while the missing agreement with the other conjunct is deleted with some form of elipsis. As pointed out in Munn (1999), this analysis predicts sentences with a collective predicate are impossible. Examples such as (27) argue against such an analysis.

- (27) a. Nonet je sestavljalo pet moških in štiri ženske.  
nonet aux<sub>SG</sub> composed<sub>N-SG</sub> 5 men and 4 women  
b. Štiri ženske in pet moških je sestavljalo nonet.  
4 women and 5 men aux<sub>SG</sub> composed<sub>N-SG</sub> nonet

If this were a case of clausal conjunction where each clause would contain its own subject, it should not be possible to say (30), since you need 9 people for a nonet. These data therefore show the observed case of closest conjunct agreement is a case of agreement with some internal part of the coordinated subject and should thus be highly theoretically interesting.

#### 5. Experimental confirmation

Marušič, Nevins and Badecker (ms.) tested judgments like those in (22-26) experimentally, explicitly contrasting 5&Ups with lexical neuter singulars. The experiment consisted of 126 sentences, 60 of which were test sentences with different combinations of conjuncts and 66 fillers without conjuncts. Participant read a model sentence on screen, pressed a button for the new screen with a new replacement noun phrase. The task was to produce a new sentence in which they replaced subject of model sentence with new noun phrase. Conditions and fillers were randomized. Responses were recorded and tabulated afterwards. There were 10 participants, yielding 600 test sentences results.

In order to compare 5&Ups with lexical neuter singulars in 5 conditions, we performed a Fisher's Exact Test on the 2x3 count data with Laplace smoothing. The results are shown above the corresponding plots of the raw data:

- (28) a. Masc.PI + Neut.Sg vs. Masc.PI + 5Up  
p-value = 1.625e-09, highly significant:

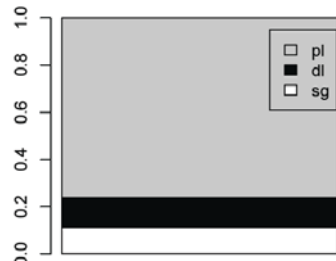


Figure 1: Masc.PI+Neut.Sg

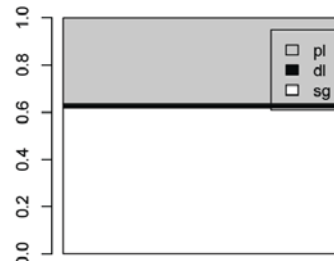


Figure 2: Masc.PI+5&Up

- b. Fem.PI + Neut.Sg vs. Fem.PI + 5Up  
p-value = 1.382e-09, highly significant:

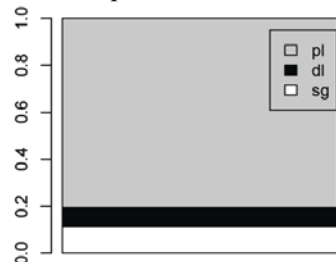


Figure 3: Fem.PI+Neut.Sg

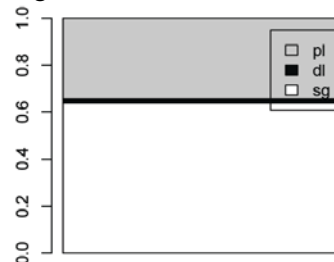


Figure 4: Fem.PI+5&Up

- c. Neut. Sg + Neut. Sg vs. 5Up + 5Up  
p-value < 2.2e-16, highly significant:

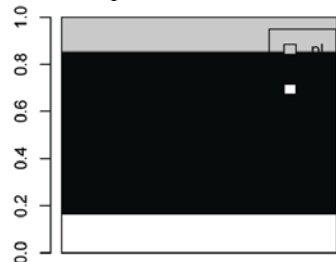


Figure 5: Neut.Sg+Neut.Sg

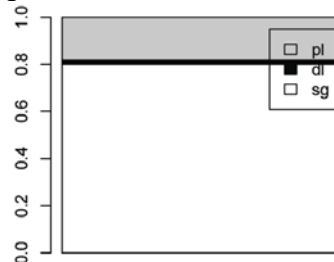


Figure 6: 5&Up+5&Up

- d. Neut. Sg + Masc. Pl vs. 5Up + Masc.Pl  
p-value = 0.05018, not significant:

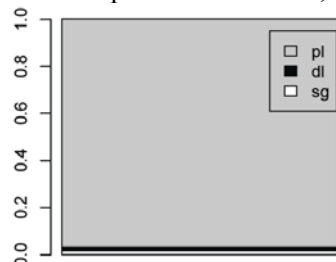


Figure 7: Neut.Sg+Masc.Pl

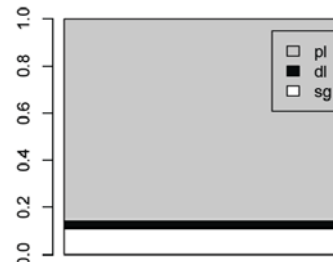


Figure 8: 5&Up+Masc.Pl

- e. Neut. Sg + Fem. Pl vs. 5Up + Fem.Pl  
p-value = 0.7141, not significant:

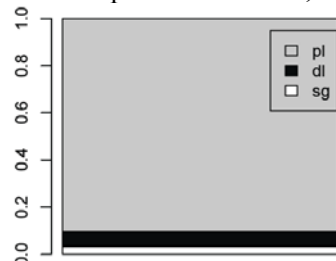


Figure 9: Neut.Sg+Fem.Pl

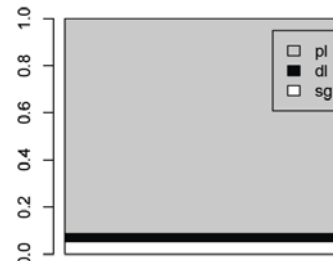


Figure 10: 5&Up+Fem.Pl

(28a-c) show that 5up vs. Neut.sg are different when in 2nd position inside the preverbal coordinated subject, but (28d-e) show they are not different when in 1st position inside a coordinated subject (preverbally). In sum, the presence of a 5&Up triggers 2nd-conjunct agreement, thereby leading to identical results of plural agreement when in the first conjunct in (28d-e), but distinct results when in the second conjunct, as they lead to *singular* agreement from this position.

## 6. A Theoretical Model of the Effect of 5&Ups

Our experimental results show that, when it comes to conjuncts that include 5&Ups, they do not pattern like neuter singulars at all. The generalization is that they cause Computation-by-ConjP to completely fail: whereas two lexical neuter singulars cause ConjP to register a

number value of neuter dual, the presence of a 5&Up anywhere in the conjunct causes an outright failure of ConjP to record any number.

The proposal is that ConjP inspects its daughters in order to determine its number feature. If there are exactly two daughters with [+singular] features, it records dual. If there is one or more daughter with [-singular] features, it records plural. However, if any of the daughters are lacking a value for the feature [ $\pm$  singular] at the DP level (as do 5&Ups; see (20) above), ConjP's value for number is undefined and hence defective as an agreement target.

Agreement with a 5&Up is actually failure to agree at all, leading to neuter singular. In Slovenian, neuter is the default gender for a verb that finds no argument to agree with. This is clearly the case as evidenced by sentences that lack any nominative argument, such as (11) above.

Thus, while neuter as the result of agreement with a noun such as *teleta* 'calf-neut.' reflects lexical specification on the noun, neuter as the result of agreement with a 5&Up reflects *failure* of verbal agreement: it is last-resort default insertion of neuter on the verb in order to provide morphological convergence.

Recall our overall theory from Section 1 and 2: there are two basic strategies of agreement in Slovenian: agreement with ConjP or agreement with the closest conjunct.<sup>4</sup> In principle both are equally available for speakers during production. However, the presence of a 5&Up within the ConjP renders the first option impossible, as the ConjP has an undefined number value when one of its daughters has no phi-features. Therefore the only grammatical option in such cases is to agree with but one of the conjuncts.

In sum, the proposal that a 5&Up renders Computation-by-ConjP undefined -- and hence renders impossible agreement with ConjP -- derives the generalization that the presence of a 5&Up anywhere within a conjunct leads to agreement with one of the conjuncts. As there is no default value for number, the only grammatical option is full agreement with the closest conjunct. This finding is consistent with the account of Computation-by-Conj of Marušič, Nevins & Saksida (2007); when this mechanism fails, both number & gender seek the closest conjunct.

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<sup>4</sup> Agreement with the highest conjunct is also a potential operation. Due to its weakness as an effect in the results, we omit it from the discussion for reasons of space, noting that little changes with respect to the argument based on 5&Ups.

If the closest conjunct is a 5&Up, however, this effectively results in complete failure of verbal agreement, adopting the proposal of Section 3 that 5&Ups block projection of phi-features to the DP level. Thus, when a 5&Up is the closest conjunct, the maximally unmarked number and gender features of neuter singular are inserted by morphological default on the verb.

The broader conclusion, of general interest to morphological theory, is that the presence of neuter singular agreement in the presence of 5&Ups is distinct from a lexical neuter singular, as evidenced by the comparisons in (28). Conjunct agreement in Slovenian demonstrates that two surface-identical morphological patterns may be the result of quite different underlying morphosyntactic operations, one of which is, in the case of 5&Ups, the failure of the verb to find an agreement target, leading to a last-resort morphological default.

#### References:

- Aoun, Joseph, Elabbas Benmamoun, and Dominique Sportiche. 1994. Agreement, word order, and conjunction in some varieties of Arabic. *Linguistic Inquiry* 25: 195-220.
- Babby, Leonard. 1985. Noun phrase internal case agreement. *Russian linguistics* 9: 1-15.
- Benmamoun, Elabbas, Archana Bhatia, and Maria Polinsky. 2009. Closest Conjunct Agreement in Head-Final Languages. Ms. UIUC, HU.
- Bošković, Željko. 2008. Unifying first and last conjunct agreement. Ms., University of Connecticut.
- Citko, Barbara. 2004. Agreement Asymmetries in Coordinate Structures. In *FASL 12*. Michigan Slavic Publ.
- d'Alessandro, Roberta. 2007. *Impersonal si constructions*. Mouton de Gruyter.
- Franks, Steven. 1994. Parametric properties of numeral phrases in Slavic. *Natural Language and Linguistic Theory*, 12(4), 597-674.
- Franks, Steven. 2002. A Jakobsonian Feature Based Analysis of the Slavic Numeric Quantifier Genitive. *Journal of Slavic Linguistics* 10: 141-81.
- Halle, Morris. 1990. An approach to morphology. *Proceedings of NELS* 20. GLSA University of Massachusetts, Amherst. pp. 150-184.



- Herrity, Peter. 2000. *Slovene: A Comprehensive Grammar*. London: Routledge.
- van Koppen, Marjo and Johan Rooryck. 2008. Resolving resolution: Underspecification and the Law of Coordination of Likes. Manuscript: LingBuzz – 000760.
- Johannessen, Janne B. 1998. Partial agreement and coordination. *Linguistic Inquiry* 27: 661-76.
- Marušič, Franc, Andrew Nevins, and William Badecker. 2008. Experimental Approaches to the Study of Grammar: Agreement and Gender Resolution in Slovenian. CUNY 2008 conference.
- Marušič, Franc, Andrew Nevins, and William Badecker. In prep. Experimental evidence for restricted variation in Slovenian conjunct agreement. Ms. UNG, HU, UA.
- Marušič, Franc, Andrew Nevins, and Amanda Saksida. 2007. Last-conjunct agreement in Slovenian. In *FASL 16*, pp 210-227.
- Marušič, Franc and Rok Žaucer (to appear). Two Strategies for Combining Adjectives with Indefinite Pronouns. In *Proceedings of NELS 38*.
- Matushansky, Ora. 2009. Some cases of Russian. *FDSL 7.5 Proceedings*.
- Moosally, Michelle. 1998. Noun Phrase Coordination: Ndebele Agreement Patterns and Crosslinguistic variation. PhD thesis, University of Texas.
- Munn, Alan. 1999. First conjunct agreement: against a clausal analysis. *Linguistic Inquiry* 30:643-683.
- Pereltsvaig, Asya. 2006. Small Nominals. *Natural Language & Linguistic Theory* 24: 433–500